



## TRANSMISSION CORPORATION OF TELANGANA LIMITED

From  
The Chief Engineer,  
Lift Irrigation Schemes,  
TSTRANSCO,  
Vidyut Soudha,  
HYDERABAD – 500 082.

To  
M/s Vikran Engineering and Exim Pvt Ltd,  
401, Odyssey I.T Park, Road No.9,  
Thane West, Thane,  
Maharashtra-400604

**Contract Award P.O.No.PM- 456/2020/(SAP PO No.)5500000772/CE/LIS/SE(LI)/DE3(LIS)  
ADE6 /F. Kaleshwaram LIS, Yacharam Thanda/ D.No. 450 /20, Dt:09 .07.2020**

Sir,

Sub: Tender Specification No. e-TSTLI-03/2019: Extension of Power supply at 220kV Level to Yacharam Thanda pumping station for a load of 90MW (3x30MW) - Supply, Erection, Testing and commissioning of (i)220/11kV Yacharam Thanda Substation including Supply of Transformers(3x40 MVA+2x20/25 MVA), (ii) 220kV DC line (28KM) from 400/220 KV Dichpally Substation to proposed 220/11kV Yacharam Thanda Substation, (iii) 2 Nos 220 KV Bay Extensions at 400/220 KV Dichapally SS and (iv) 220 KV line(3.6 KM) on Narrow Based Towers from 220/11 KV Yacharam Thanda Switchyard to the PTR deck in Kamareddy district under Package-22 of Kaleshwaram Lift Irrigation Scheme on turnkey basis- **Detailed Supply Purchase Order - Issued.**

- Ref: 1) Specification No. e-TSTLI-03/2019.  
2) Your on-line bid Dated 05.02.2020.  
3) This Office LOI issued vide Lr.No.ED(LIS)/ SE(LI)/ DE(LIS)/ ADE6/ F.Kaleshwaram-Yacharam Thanda/ D.No.327/2020, Dt.27.05.2020.  
4) Lr.No.VEEPL/2020-21/TSTRANSCO/e-03/Acceptance, dt:04.06.2020

\* \* \*

I, acting for and on behalf of and by the order and direction of the Transmission Corporation of Telangana Limited (herein after referred to as 'TSTRANSCO'), accept your offer in the reference (2) cited for Supply, Erection, Testing and commissioning of (i)220/11kV Yacharam Thanda Substation including Supply of Transformers(3x40 MVA+2x20/25 MVA), (ii) 220kV DC line (28KM) from 400/220 KV Dichpally Substation to proposed 220/11kV Yacharam Thanda Substation, (iii) 2 Nos 220 KV Bay Extensions at 400/220 KV Dichapally SS and (iv) 220 KV line(3.6 KM) on Narrow Based Towers from 220/11 KV Yacharam Thanda Switchyard to the PTR deck in Kamareddy district under Package-22 of Kaleshwaram Lift Irrigation Scheme on turnkey basis as per the terms and conditions of Specification No. e-TSTLI-03/2019 and award for a total value of **Rs. 41,36,63,830/- (Rupees Forty One Crores Thirty Six Lakhs Sixty Three Thousand Eight Hundred and Thirty Only)** as detailed in the schedule enclosed, subject to the conditions set out in this order. This order confirms the Letter of Intent issued vide this office letter (3) cited.

**2. SCOPE:**

This order relates to the Supply of Material/Equipment (including Power Transformers-3x40 MVA+2x20/25 MVA), required for Erection, Testing & Commissioning of 220/11kV Yacharam Thanda Sub-Station (Load 90 MW = 3 x 30 MW), 220kV DC line (28KM) from 400/220 KV Dichpally Substation to proposed 220/11kV Yacharam Thanda Substation, 2 Nos 220 KV Bay Extensions at 400/220 KV Dichapally SS and 220 KV line(3.6 KM) on Narrow Based Towers from 220/11 KV Yacharam Thanda Switchyard to the PTR deck in Kamareddy district under Package-22 of Kaleshwaram Lift Irrigation Scheme on turnkey basis as per the terms and conditions in Specification No. e-TSTLI-03/ 2019, except those modified in this Order. GST@12% is added to the rates indicated in Schedule-A appended to this Order are for supply of Equipment/Material as per your offer vide reference (2<sup>nd</sup>) cited. The material/equipment that is to be supplied by you shall be delivered at the places of work sites. The Material/Equipment to be supplied, if any at later date by TSTRANSCO are to be taken delivery from TLC Stores at Erragadda/ Shapur Nagar /or any other store and shall be transported to site by you at your cost. Any surplus material to be returned by you shall also be devoluted at TLC Stores, TSTRANSCO at your cost.

**ABSTRACT OF SCHEDULES:**

<b>Sl. No.</b>	<b>Description</b>	<b>Amount</b>
1	Schedule – A (Supply of Material/Equipment)	<b>Rs. 41,36,63,830.00</b>

The accepted tender percentage is **4.25% (Less)**.

**3. GENERAL CONDITIONS:**

Except where otherwise agreed to in this acceptance letter, all the terms and conditions stipulated in the Specification No. e-TSTLI-03/2019 are binding on you and these shall form part of this contract.

**4. STANDARD :**

The Material/ Equipment to be supplied under the contract shall be in accordance with the Tender Specification and the latest scientific and technical standards.

**5. PRICES :**

In respect of items covered under Schedule-A, price variation is applicable for

transmission line towers, Power Transformers, substation structures, power conductor, cables and isolators. The rates for all the remaining items of Equipment & Materials covered in Schedules-A are **firm** on all accounts such as increase in quantity of Equipment / Materials over that provided in the contract, execution of contract beyond the scheduled completion/delivery period for whatever reasons, increase in the rates of material and labour both during and beyond the completion period etc.

The estimates / Schedules are prepared with prices FADS inclusive of packing and forwarding and other legally permissible duties and levies wherever applicable, handling charges to cover the transport from destination to site / stores, unloading at destination and insurance (transit and storage at site including erection risks).

**6. PRICE VARIATION (PV) Clause:**

**Bid submission closing date: 05.02.2020**

6.1.1 The price variation is applicable for Transmission Line Tower Parts, Substation Structures, Cables, Power Transformers, Isolators and Conductor.

6.1.2 The concerned Executive Engineer/LIS will calculate the Price Variation.

The calculation of Price Variation is as follows.

6.2 The Price adjustment applicable in respect of Transmission Line Tower Parts and Substation Structures is as per T.O.O.(CE-Construction-2) Ms.No.242, Dt.08.11.2012, T.O.O.(CE-Construction) 50, Dt.10.06.2008 & T.O.O. (CE-Construction) 87, Dt.29.07.2008 subject to the following conditions.

- a) The price adjustment shall be applicable within original contract period or period extended on grounds of the departmental delays and valid reasons and shall not be applicable for the extension granted on account of the contractor's fault.
- b) Price adjustment shall be applicable for actual components of items of supply actually carried out. The price variation formula is  $PV = (\text{Final Rate} - \text{Basic Rate}) \times \text{Quantity}$ .
- c) The adjustment scheme will be applied where the variation (increase or decrease) is more than 5%.
  - i) In case variation is positive, the department will operate variation in rates only to the extent where it is above 5% over the estimated rates. Thus if the price excess is 10%, payment will be made only to the extent of 5% (10% - 5%). The same shall be followed for negative price variation.
  - ii) For the time extension due to department fault, both +ve and -ve price variations are applicable.

- iii) For the time extension due to contractor's fault, only -ve price variation is applicable.
- d) The Chief Engineer (Construction) will communicate the monthly rates of Transmission Line Tower Parts and Substation Structures.
- e) The Basic rate of Transmission Line Tower Parts and Substation Structures considered in the estimate are (i)Transmission line towers : **Rs. 70259/-** per MT and (ii) Substation Structures : **Rs. 64454/-** per MT (for the month of August -2019).
- f) The final rate of Transmission line tower parts, Substation structures and Flat for the purpose of price variation shall be the rate communicated by the Chief Engineer/ Construction for every month as on 2 months prior to the date of dispatch/delivery and for earth flat one month prior to the date of dispatch/delivery. **The date of delivery shall be the date of receipt of materials in good condition at destination / Site stores (i.e. check measurement date as per Form-13) for the purpose of price variation calculations.**
- g) The rate communicated by TSTRANSCO for Transmission Line Tower Parts and Substation Structures is exclusive of all taxes and duties. Hence GST @ 12% will be applicable on price variation amount.

6.3. Price Variation is applicable in respect of Supply of Conductor and the price shall be based on and subject to adjustment due to variations in the following factors:

- (i) **E.C. Grade Aluminium:** The ex-works cost of indigenous E.C. grade aluminium wire rod based on average price of M/s. Nalco, Balco, Hindalco, and Malco as given in CACMAI circulars prevailing as on 30 days prior to the Bid submission closing date i.e 05.02.2020.
- (ii) **HTGS wire:** The ex-works cost of per MT of HTGS wire exclusive of duties and taxes corresponding to 3.00 to 4.09mm designation as given in CACMAI circulars prevailing as on 30 days prior to the Bid submission closing date i.e 05.02.2020.
- (iii) The above basic prices of raw materials will remain unaltered during the period of execution of contract.
- iv) For any variation up or down in the prices of raw materials as defined above, for every one rupee change in the rate of one MT of EC grade aluminum wire rod and HTGS wire the corresponding increase or decrease in price per KM of finished conductor allowable shall be as given below:

CONDUCTOR	Variation in Rs. per KM of conductor	
	For Aluminium	For HTGS wire 3.00 mm to 4.09 mm
Panther ACSR Conductor	0.588	0.388

Zebra ACSR Conductor	1.185	0.438
Moose ACSR Conductor	1.467	0.537

- v) For the purpose of calculation of price variation the prices of HTGS wire and EC grade aluminum shall be taken as those prevailing on the first working day of the calendar month one month prior to the date of delivery.
- vi) The Base and final prices / indices shall correspond to same manufacturers as given in the CACMAI. The price variation formula is  $PV = (\text{Final Rate} - \text{Basic Rate}) \times \text{Quantity}$ .
- vii) The date of delivery shall be the date of receipt of materials in good condition at destination stores i.e. check measurement date as per Form-13, for the purpose of price variation calculations.
- viii) If the delivery of the material is within the scheduled delivery period, the Price Variation applicable will be based on the actual delivery.
- ix) In case the purchaser advances the delivery, the price variation applicable will be based on the actual delivery.
- x) Irrespective of increase in the prices of raw materials, the total Price Increase per KM of the Conductor will be limited to a maximum of 50% over the Unit price mentioned in Purchase Order. However there is no ceiling for negative variation.
- xi) The Price Variation amount can be claimed for each batch of supplies made from time to time (out of total quantity) and will be payable after due verification.
- xii) In case of conductors, where the supplier makes his own arrangements to get the Rod made out of Aluminium Ingots, the prices of Aluminium Rod as per CACMAI mentioned above will only be taken into consideration for arriving at the price variation claims irrespective of whatever expenditure the supplier might have incurred in getting the ingot converted into Rod.
- xiii) If the date of delivery as defined in the P.V. formula is beyond the contracted delivery date the contracted delivery date or the actual delivery date which ever is advantageous to the Purchaser will form the basis for calculation of price variation.
- xiv) Notwithstanding the formula applicable for regulating the price variation, if at any time any documentary evidence proof or certificate in regard to the price variation bills is required by the Purchaser, the supplier will have to furnish the same to the Purchaser.
- 6.4. The Price Variation applicable in respect of **Cables, Power Transformers and Isolators** is subject to the following conditions:

- i) Price variation shall be applicable for both upward and downward variation in prices of respective items within the original completion period. Price variations for all cables and isolators have been adjusted with IEEMA.
- ii) The price quoted/accepted shall be based on the input cost of raw materials/ components and labour cost as on the date of quotation and the same is deemed to be related to prices of raw materials and All India Average Consumer Price Index number for industrial workers as specified in the price variation clauses given below. In case of any variation in these raw materials prices /indices, the price payable shall be subject to adjustment up or down in accordance with the formulae mentioned hereunder
- iii) For the purpose of Price adjustment, the date of delivery shall be the date on which the cable is notified as being ready for inspection / dispatch in case of waiver of inspection (in the absence of such notification, the date of manufacturer's dispatch note shall be considered as the date of delivery) or the contracted delivery date (including any agreed extension thereto), whichever is earlier.
- iv) The price variation amount can be claimed for each batch of supplies made from time to time (out of total quantity) and will be payable after due verification.
- v) If the date of delivery as defined in the P.V. formula is beyond the contracted delivery date, the contracted delivery date or the actual delivery date whichever is advantageous to the TSTRANSCO will form the basis for calculation of price variation.
- vi) The total adjustment for Control cables, LT Aluminium power cable and Isolators shall be subject to a maximum ceiling of + 50% individually of the respective unit prices. However there is no ceiling for negative variation.
- vii) Notwithstanding the formula applicable for regulating the price variation, if at any time any documentary evidence proof or certificate in regard to the price variation bills is required by the TSTRANSCO, the supplier will have to furnish the same to the TSTRANSCO.
- viii) IEEMA indices have been taken into consideration for arriving the base rates of all cables and isolators.

#### **6.4.1 PRICE VARIATION FORMULA APPLICABLE FOR CABLES**

##### **i) For Steel Armoured PVC Insulated Copper Control Cables:**

$$P = P_o + CuF(Cu-Cu_o) + CCFCu(CC-CC_o) + FeF(Fe-Fe_o)$$

##### **ii) For Unarmored PVC Insulated Copper Control Cables:**

$$FeF = 0$$

Hence,  $P = P_0 + CuF(Cu - Cu_0) + CCFCu(CC - CC_0)$

Wherein,

- P = Price payable as adjusted in accordance with the above formula in Rs. per Km
- $P_0$  = Price quoted/accepted in Rs. per Km.
- CuF = Variation factor for **Copper** applicable depending upon type and size of the cable.
- Cu<sub>0</sub> = Price of CC copper rods. This price is as applicable on the 1<sup>st</sup> working day of the month, one month prior to Bid submission closing date (i.e 05.02.2020).
- CCFCu = Variation factor for **PVC Compound** applicable depending upon type and size of the cable.
- CC<sub>0</sub> = Price of PVC Compound. This price is as applicable on the 1<sup>st</sup> working day of the month, one month prior to Bid submission closing date (i.e 05.02.2020).
- FeF = Variation factor for **Steel** for Steel Armoured PVC Insulated Copper Control Cables applicable depending upon type and size of the cable.
- Fe<sub>0</sub> = Price of steel strips/steel wires. This price is as applicable on the 1<sup>st</sup> working day of the month, one month prior to Bid submission closing date (i.e 05.02.2020).
- Cu = Price of CC copper rods. This price is as applicable on the 1<sup>st</sup> working day of the month, two months prior to the date of delivery.
- CC = Price of PVC Compound. This price is as applicable on the 1<sup>st</sup> working day of the month, two months prior to the date of delivery.
- Fe = Price of steel strips/steel wires. This price is as applicable on the 1<sup>st</sup> working day of the month, two months prior to the date of delivery.

- (\*) Variation factor for copper conductor (CuF), PVC compound (CCFCu) for PVC Insulated Control Cables, Steel (FeF) for control cables with copper conductor is tabulated below.

TABLE – I: VARIATION FACTOR FOR COPPER CONDUCTOR (CuF)  
CONTROL CABLE WITH COPPER CONDUCTOR

No. of Cores	Nominal Cross Sectional Area ( in Sq mm) = 2.5 Sq mm
2	0.047
3	0.070
4	0.094
5	0.117
6	0.141
7	0.164
8	0.182
9	0.205
10	0.235
12	0.282
14	0.329
16	0.376
18	0.410
19	0.446
20	0.456
24	0.563
27	0.634
30	0.704
37	0.869
44	1.033
52	1.221
61	1.432

TABLE – II: VARIATION FACTOR FOR PVC COMPOUND (CCFCu) PVC  
INSULATED CONTROL CABLEs WITH COPPER CONDUCTOR

No. of Cores	Core Size = 2.5 Sq mm	
	<b>Unarm</b>	<b>Arm</b>
2	0.125	0.139
3	0.141	0.157
4	0.161	0.179
5	0.187	0.206



6	0.234	0.260
7	0.234	0.260
8	0.292	0.325
9	0.300	0.335
10	0.303	0.337
12	0.334	0.371
14	0.389	0.409
16	0.435	0.458
18	0.474	0.500
19	0.476	0.501
20	0.519	0.546
24	0.584	0.615
27	0.631	0.664
30	0.706	0.743
37	0.835	0.879
44	1.019	1.026
52	1.100	1.158
61	1.246	1.312

TABLE – III : VARIATION FACTOR FOR STEEL (FeF) PVC INSULATED CONTROL CABLES WITH COPPER CONDUCTOR

No. of Cores	Core Size = 2.5 Sq. mm.	Shape of armour
2	0.277	W
3	0.289	W
4	0.314	W
5	0.342	W
6	0.379	W
7	0.379	W
8	0.456	W
9	0.275	F
10	0.325	F
12	0.342	F
14	0.360	F
16	0.372	F
18	0.350	F
19	0.397	F
20	0.400	F
24	0.475	F
27	0.478	F

30	0.503	F
37	0.548	F
44	0.601	F
52	0.641	F
61	0.685	F

**iii) For Aluminium conductor PVC Insulated Cables:**

$P = P_0 + AIF (AI - AI_0) + CCF AI (CC - CC_0) + FeF (Fe - Fe_0)$  Wherein,

$P$  = Price payable as adjusted in accordance with the above formula in Rs per Km.

$P_0$  = Price quoted/accepted in Rs per Km.

$AIF$  = Variation factor for **Aluminium** applicable depending upon type and size of the cable.

$AI_0$  = Price of EC grade aluminium rods (properzi rods). This price is as applicable on the 1<sup>st</sup> working day of the month, one month prior to Bid submission closing date (i.e 05.02.2020).

$CCFAI$  = Variation factor for **PVC Compound** applicable depending upon type and size of the cable.

$CC_0$  = Price of PVC Compound. This price is as applicable on the 1<sup>st</sup> working day of the month, one month prior to Bid submission closing date (i.e 05.02.2020).

$AI$  = Price of EC grade aluminium rods (properzi rods). This price is as applicable on the 1<sup>st</sup> working day of the month, two months prior to the date of delivery.

$CC$  = Price of PVC Compound. This price is as applicable on the 1<sup>st</sup> working day of the month, two months prior to the date of delivery.

(\*) Variation factor for Aluminum (AIF), PVC compound (CCFAI) for PVC Insulated Power cables, Steel (FeF) for PVC Insulated Power cables with Aluminum conductor is tabulated below.

TABLE – IV : VARIATION FACTOR FOR ALUMINIUM (AIF) POWER CABLES WITH ALUMINIUM CONDUCTOR

Nominal Cross Sectional Area (in Sq mm )	3.5 core
25 /16	0.262
35 /16	0.345
50 /25	0.478
70 /35	0.687
95 /50	0.949
120 / 70	1.221
150 /70	1.464
185 /95	1.861
225/120	2.287
240 /120	2.421
300 /150	3.033
400 /185	3.873

TABLE – V : VARIATION FACTOR FOR PVC COMPOUND (CCFAI) PVC INSULATED 1.1 KV POWER CABLES WITH ALUMINIUM CONDUCTOR

Nominal Cross Sectional Area (in Sq mm )	3.5 core	
	Unarm	arm
25	0.422	0.444
35	0.489	0.515
50	0.613	0.645
70	0.707	0.744
95	0.908	0.927
120	1.024	1.045
150	1.289	1.315
185	1.499	1.530
225	1.840	1.878
240	1.990	2.031
300	2.361	2.409
400	2.616	2.669
500	3.687	3.762

(\*) FeF = Variation factor for steel

Feo = Price of steel strips/steel wire. This price is as applicable on first working day of the month, one month prior to Bid submission closing date(i.e 05.02.2020).

Fe = Price of steel strips/steel wire. This price is applicable on the first working day of the month, prior to the date of delivery.

TABLE – VI : VARIATION FACTOR FOR STEEL (FeF) PVC INSULATED 1.1 KV POWER CABLES WITH ALUMINIUM CONDUCTOR

Nominal cross sectional Area (in Sq mm)	3.5 core		Shape of armour
25	0.382		F
35	0.411		F
50	0.469		F
70	-		F
95	0.616		F
120	0.675		F
150	0.731		F
185	0.820		F
240	0.937		F
300	1.055		F
400	1.172		F
500	1.348		F

#### 6.4.2 PRICE VARIATION FORMULA APPLICABLE FOR ISOLATORS

a) Price variation calculation for Insulator Portion of Isolators :

$$P = \frac{P_0}{100} \left\{ 12 + 5 \times \frac{Z_n}{Z_{no}} + 22 \times \frac{FP}{FP_0} + 27 \times \frac{MP}{MP_0} + 10 \times \frac{BC}{BC_0} + 7 \times \frac{WP}{WP_0} + 17 \times \frac{W}{W_0} \right\}$$

Wherein,

P = Price payable as adjusted in accordance with the above formula.

P<sub>0</sub> = Price quoted/accepted.

Z<sub>no</sub> = Price of electrolytic high grade zinc.

This price is as applicable on the first working day of the month, one month prior to the Bid Submission Closing Date(i.e., 05.02.2020).

FP<sub>0</sub>= Wholesale price index number for 'Fuel & Power'(Base: 2011-12=100)

This index number is as applicable three months prior to the Bid Submission Closing Date(i.e., 05.02.2020).

MPo= Wholesale price index number for ‘Manufacture of structural metal products’ (Base: 2011-12=100)

This index number is as applicable three months prior to the Bid Submission Closing Date(i.e., 05.02.2020).

BCo= Price of Ball Clay

This price is as applicable on the first working day of the month, one month prior to the Bid Submission Closing Date(i.e., 05.02.2020).

WPo = Wholesale price index number for ‘Manufacture of Wood and of Products of Wood and Cork’ (Base: 2011-12=100)

This index number is as applicable three months prior to the Bid Submission Closing Date(i.e., 05.02.2020).

Wo = All India average consumer price index number for industrial workers, as published by the Labour Bureau, Ministry of Labour, Govt. of India (Base: 2001=100)

This index number is as applicable three months prior to the Bid Submission Closing Date(i.e., 05.02.2020).

Zn = Price of electrolytic high grade zinc.

This price is as applicable on the first working day of the month, Two months prior to the date of delivery.

FP = Wholesale price index number for ‘Fuel & Power’(Base: 2011-12=100)

This index number is as applicable for the month, Four months prior to the date of delivery

MP = Wholesale price index number for ‘Manufacture of structural metal products’ (Base: 2011-12=100)

This index number is as applicable for the month, Four months prior to the date of delivery.

BC = Price of Ball Clay

This price is as applicable on the first working day of the month, Two month prior to the date of delivery

WP = Wholesale price index number for ‘Manufacture of Wood and of Products of Wood and Cork’ (Base: 2011-12=100)

This index number is as applicable for the month, Four months prior to the date of delivery.

W = All India average consumer price index number for industrial workers, as published by the Labour Bureau, Ministry of Labour, Govt. of India (Base: 2001=100)

This index number is as applicable for the month Four months prior to the date of delivery.

**ii) Price variation calculation for Metallic Portion of Isolators:**

$$P = \frac{P_o}{100} \left\{ 19 + 17 \times \frac{IS}{IS_o} + 17 \times \frac{C}{C_o} + 13 \times \frac{AL}{AL_o} + 19 \times \frac{IN}{IN_o} + 15 \times \frac{W}{W_o} \right\}$$

Where in,

P - Price payable as adjusted in accordance with the above formula

Po - Price quoted/accepted

ISo - Wholesale price index number for 'Iron & Steel(Base : 1993-94 = 100).  
This index number is as applicable for the week ending 1<sup>st</sup> Saturday of the month, three months prior to the Bid Submission Closing Date (i.e., 05.02.2020).

Co = Average LME settlement price of copper wire bars.  
This price is as applicable for the month, two months prior to the Bid Submission Closing Date(i.e., 05.02.2020).

ALo = Price of Busbar grade Aluminium.  
This price is as applicable on the 1<sup>st</sup> working day of the month, one month prior to the Bid Submission Closing Date(i.e., 05.02.2020).

INo = IEEMA index for insulator (Base: January 2003=100)  
This index number is as applicable on the 1<sup>st</sup> working day of the month, one month prior to the Bid Submission Closing Date(i.e., 05.02.2020).

Wo = All India average consumer price index number for industrial workers, as published by the Labour Bureau, Ministry of Labour, Govt of India (Base 2001 = 100).  
This index number is as applicable on the first working day of the month, four months prior to Bid Submission Closing Date(i.e., 05.02.2020).

IS = Wholesale price index number for "Iron & steel (Base: 1993-94=100)"  
This index number is as applicable for the week ending 1<sup>st</sup> Saturday of the month, four months prior to the date of delivery.

C = Average LME settlement price of copper wire bars.  
This price is applicable for the month, three months prior to the date of delivery.

AL = Price of Busbar grade Aluminum.

This price is as applicable on the 1<sup>st</sup> working day of the month, two months prior to the date of delivery.

IN = IEEMA index for insulator (Base: January 2003=100).

This price is as applicable on the 1<sup>st</sup> working day of the month, two months prior to the date of delivery

W = All India average consumer price index number for industrial workers, as published by the Labour Bureau, Ministry of Labour, Govt of India (Base 2001 = 100).

This index is as applicable on the first working day of the month, five months prior to the date of delivery.

### **PRICE VARIATION CLAUSE FOR POWER TRANSFORMER:**

The Price variation formula applicable as per IEEMA circular No. IEEMA/ PVC/ POWER/2003(R-1), dt: 01.04.2015, communicated by IEEMA transformer division.

$$P = \frac{P_0}{100} \left\{ 10 + 29 \frac{C}{C_0} + 27 \frac{ES}{ES_0} + 7 \frac{IS}{IS_0} + 5 \frac{IM}{IM_0} + 7 \frac{TO}{TO_0} + 15 \frac{W}{W_0} \right\}$$

Where,

P = Price payable as adjusted in accordance with the above formula.

P<sub>0</sub> = Price quoted/confirmed

C<sub>0</sub> = Average LME settlement price of copper wire bars (refer notes)  
This price is as applicable for the month, ONE month prior to the bid submission closing date i.e., 05.02.2020.

ES<sub>0</sub> = Price of CRGO Electrical Steel Lamination (refer notes)  
This price is as applicable on the 1<sup>st</sup> working day of the month, ONE month prior to the bid submission closing date i.e., 05.02.2020.

IS<sub>0</sub> = Average price of Steel Plates 10mm thick (refer notes)  
This price is as applicable on the 1<sup>st</sup> working day of the month ONE month prior to the bid submission closing date i.e., 05.02.2020.

IM<sub>0</sub> = Price of Insulating Materials (refer notes)  
This price is as applicable on the 1<sup>st</sup> working day of the month, ONE month prior to the bid submission closing date i.e., 05.02.2020.

TO<sub>0</sub> = Price of Transformer Oil (refer notes)  
This price is as applicable on the 1<sup>st</sup> working day of the month, ONE month prior to the bid submission closing date i.e., 05.02.2020.

W<sub>o</sub> = All India average consumer price index number for industrial workers, as published by the Labour Bureau, Ministry of Labour, Govt. of India (Base: 2001=100)  
This price is as applicable on the 1<sup>st</sup> working day of the month, THREE months prior to the bid submission closing date i.e., 05.02.2020.

The above prices and indices are as published by IEEMA vide circular reference number No. IEEMA/PVC/PWR\_TRF\_upto 400kV/2015/\_/\_ one month prior to the date of tendering.

C = Average LME settlement price of Copper wire bars (refer notes)  
This price is as applicable for the month, two months prior to the date of delivery.

ES = C&F price of CRGO Electrical Steel Sheets (refer notes)  
This price is as applicable on the 1<sup>st</sup> working day of the month, TWO months prior to the date of delivery.

IS = Average price of Steel Plates 10mm thick (refer notes)  
This price is as applicable on the 1<sup>st</sup> working day of the month ONE month prior to the date of delivery.

IM = Price of Insulating Materials (refer notes)  
This price is as applicable on the 1<sup>st</sup> working day of the month, TWO months prior to the date of delivery.

TO = Price of Transformer Oil (refer notes)  
This price is as applicable on the 1<sup>st</sup> working day of the month, one month prior to the date of delivery.

W = All India average consumer price index number for industrial workers, as published by the Labour Bureau, Ministry of Labour, Govt. of India (Base: 2001=100)  
This index number is as applicable on the 1<sup>st</sup> working day of the month, THREE months prior to the date of delivery.

The above prices and indices are as published by IEEMA vide circular reference number no.IEEMA/PVC/PWR\_TRF\_upto 400kV/2015/\_/\_ one month prior to the date of delivery.

The “date of delivery “shall be the date on which the Transformer is notified as being ready for inspection/dispatch (in the absence of such notification, the date of manufacturer’s dispatch note shall be considered as the date of delivery) or the contracted delivery date (including any agreed extension thereto), whichever shall be earlier for calculation Price Variation applicable.

Irrespective of the increase in the prices of raw materials the price variance (**increase**) will be limited to a maximum of **50% over** the original quoted price and **no ceiling** for **negative variation**.

The proportionate taxes and duties on such increase or decrease in the price is to the TSTRANSCO’s account, as per actual on production of the gate pass relating to the consignments for which price variation is claimed.



If the date of delivery as defined in the P.V. formula is beyond the contracted/ scheduled delivery date, the scheduled delivery date or Notified Date of Inspection or the actual (Form-13) delivery date whichever is advantageous to the Purchaser will form the basis for calculation of price variation.

**Note:**

- i) "Price variations for Isolators (Metallic & insulator portions), Power Cables and Control Cables, will be calculated using IEEMA PV CALCULATOR, which considers all modifications issued by IEEMA from time to time."
- ii) "Price variation clause in the Purchase Order is provisional and all modifications issued by IEEMA for Isolators (Metallic & insulator portions), Power Cables and Control Cables from time to time is applicable for TSTRANSCO turnkey projects".

**7.1 TAXES AND DUTIES:**

The prices indicated in the Schedule-A are firm, except for the materials mentioned under clause (6) above, and are inclusive of all taxes & duties, Freight & Insurance and all other incidents (**GST @ 12%**).

The Schedule of prices for Schedule A items are inclusive of GST @12%. This in accordance with GOI notification No. 20/2017, Dt.22.08.2017 for DC Works (**Lift Irrigation Projects**) for Central Government/State Government /Union Territory /Local authority/ Government Authority /Government Entity.

The Contractor shall be entirely responsible for payment of all taxes, levies, duties, license fees, etc., incurred until delivery of the contracted goods to the purchaser. The contractor shall pay all types of fees, levies, taxes, duties etc. required to be paid by any National or State statute, ordinance or other law or any regulation or bye-laws of any local or other duly constituted authority in relation to the execution of works and by the rules and regulations of all Public bodies and companies whose property or rights are affected or may be affected in any way of the works.

The contractor shall in compliance with the above keep the Purchaser indemnified against all such penalties and liability of every kind for breach of any statute, ordinance or law, regulation or bye-law. Nothing in the contract shall relieve the contractor from his responsibility to pay any tax that may be levied by the Government on the turnover / profits etc., made by him in respect of the contract.

**7.2 Income Tax:**

Income tax at applicable rates as on the date of release of payment will be deducted from the gross bills as per the Income Tax Act.

**7.3 INSURANCE:**

The Goods supplied under this Contract shall be fully insured against loss or damage incidental to manufacture or acquisition, transportation, storage, delivery and erection. In case of domestic goods the insurance shall be at least for an **amount equal to 110% of the cost of the Project i.e goods** from "warehouse to warehouse (final destination)" and **storage up to commissioning** thereafter on "All Risks" basis including War Risks and Strike Clauses.

You shall have the insurance coverage as specified under Clauses (2.4), Section-II, “Financial” Volume-I of Specification No.e-TSTLI-03/2019. All insurance premiums shall be borne by you. You shall have to produce the insurance cover note before entering the agreement with Superintending Engineer/LIS/ Karimnagar as applicable Insurance will be paid as per actual on submission of original insurance documents limited to 0.5% of Project cost (Schedule-A+ Schedule-B) excluding GST @ 12%.

#### **7.4 STATUTORY VARIATION:**

Any variation up or down in statutory levy or new levies introduced after Tender schedule sale opening date under this specification will be to the account of TSTRANSCO.

In cases where delivery schedule is not adhered to by the contractor and there is upward variation / revision after the agreed delivered date the contractor will bear the impact of such levies and if there is downward variation / revision the TSTRANSCO will have to be given credit to that effect. For the variations beyond the scheduled completion period, the payment of taxes shall be limited to the tax rates applicable with in the scheduled completion period.

#### **8.1 VARIATION IN QUANTITIES & SUPPLEMENTAL ITEMS:**

The quantities indicated in the Schedule-A (Materials / Equipment) are only provisional and are likely to vary during actual execution. When quantities of any item are likely to exceed beyond 25% over and above the scheduled quantity or any new items / supplemental items arises, the Contractor shall bring the fact to the notice of Chief Engineer/Lift Irrigation Schemes well in advance and take prior orders for going ahead with the work. Without approval of this office, the Contractor shall not go ahead with the work wherever the increase in quantities exceeds beyond 25% over and above the scheduled quantities or any new items / supplemental items arise. The contractor is bound to execute/ supply all Increased / supplemental / new items that are found essential, incidental and inevitable during execution of the contract at the rates to be worked out as below:

#### **8.2 Increase in Quantities:**

The rates accepted for individual items of material / equipment covered in Schedule-A shall hold good even for any increase in agreement quantities as per actual quantities.

#### **8.3 For Supplemental / New Items:**

For the items relating to the Schedule-A where the rate can be deduced from the estimate/ /Cost Data, the rate applicable will be the estimated rate +/- tender percentage quoted/ accepted by the bidder.

For the new items where the rates cannot be deduced from the estimate / SSR, the rate payable will be arrived based on the prevailing market rates duly enquiring / collecting quotations

and observing the reasonableness of the rates by the Purchaser and without applying tender percentage.

**8.4** The contractor shall plan and procure the materials indicated in the Schedule-A duly verifying with the approved layout and profile, so that the procured quantities match with actual requirement to avoid excess supply of materials.

**8.5** The Schedule time required to supply/ complete the new / supplemental items will be indicated in the approval letter issued for new / supplemental items.

**9. TERMS OF PAYMENT:**

**A) All the payments will be made to you in the following proportion.**

- i) 80% payment will be made within 30 days for the material / equipment supplied in complete shape subject to their delivery as per the schedule of work contained in the Bar Chart and on its receipt at destination stores/site in good condition (i.e from check measurement date in Form-13). The concerned AE/LIS will receive the equipment /material in full shape at site and the concerned EE/LIS will do the check measurement and issue the Form-13. The check measurement shall be done within five days from the date of receipt of materials. The due date of payment will be from the date of check measurement mentioned in Form-13.
- ii) 10% payment will be made after erection of equipment / material.
- iii) Balance 10% payment will be made after commissioning of equipment /material.

**b). Advance Payment:**

Payment in advance before the scheduled due date of payment would be examined by TSTRANSCO on the request of vendor / contractor provided the company should agree to offer a rebate / discount @ 0.3% per week or part thereof for advancement. Based on the decision of TSTRANSCO, the finance and accounts wing will release priority payment to such firm / contractor after availing rebate / discount. The Advance payment proposals shall submit to Executive Director/Finance.

**B) The Contractor shall furnish the following documents in quadruplicate for arranging payment for the equipment / material supplied.**

- a) Copies of the invoices showing Contract No., Goods description, quantity, unit price and total amount.
- b) Acknowledgement of receipt of material from consignee i.e. Form-13
- c) Proof of payment of GST
- d) Acknowledgment of Consignee on Delivery Challan in original.
- e) Detailed packing list
- f) Documentary proof for the freight
- g) Copy of the Lorry receipt.

- h) Copies of Insurance Certificate / policies
- i) Test certificates approval and Dispatch clearance. (Not applicable for furniture, T&P and general items).
- j) Certificate certifying that the defects, if any, pointed out during inspection have been rectified
- k) The payments are subject to availability of Performance Security BG with a **validity of 12 months** as on the date of Check Measurement for proper fulfillment of performance obligations.
- l) No payments will be made for the supplies made prior to scheduled delivery date or for materials which are not in full shape.

9.1 Payments will be made by cheques / by way of Electronic Fund Transfer / RTGS from TSTRANSCO funds or Bulk Load funds. Once RTGS system is established, the bank account details submitted are final and cannot be changed till completion of the contract.

**Bank account details for payment through RTGS system:**

- 1. Name of the Bank : Bank of Maharashtra
- 2. Name of the Branch : Thane SSI
- 3. Branch Code : 00088
- 4. City : Thane
- 5. Account No. : 60261978938
- 6. MICR No. : 400014078
- 7. IFSC No. : MAHB0000088
- 8. Income Tax PAN No. : AAECR0503Q
- 9. GST Registration No. : 36AAECR0503Q1Z9
- 10. Date of GST Registration : 28.11.2019
- 11. Place of GST Registration : Telangana

9.2 The performance guarantee to be executed in accordance with this specification will be furnished on a stamp as per of TS for a value of Rs.100/-. The Bank Guarantee will be extended if required suitably.

9.3 If the supplier has received any over payments by mistake or if any amounts are due to the TSTRANSCO due to any other reason, when it is not possible to recover such amounts under the contract resulting out of this specification, the TSTRANSCO reserves the right to collect the same from any other amount and / or Bank Guarantees given by the company due to or with the TSTRANSCO.

9.4 For the payment in advance before the “scheduled date of payment”, the vendors can directly access the concerned ED(Finance) requesting advance payment against the discount offered.

**10. DELIVERY/COMPLETION PERIOD:**

The delivery/completion period for Supply of Materials / Equipments for the subject works is indicated in the table below. The commencement date of the supply project will be reckoned as follows:

**For Line:**

The period of completion of line will be reckoned from the date of issue of 10% of survey profiles.

**For Sub-Station and Bay Works:**

The period of completion of Sub-Station & Bay will be reckoned from the date of handing over of site/approved layout which ever is later.

All activities including submission of drawings for approval, arranging inspection of materials shall be completed in this period:

	<b>Supply, erection, testing and commissioning of the following works on Turnkey basis</b>	<b>Completion period</b>
(i)	220/11kV Yacharam Thanda Substation (including Power Transformers) with Automation System and 220 KV line(3.6 KM) on Narrow Based Towers from 220/11 KV Yacharam Thanda Switchyard to the PTR deck.	12 (Twelve) Months
(ii)	220kV DC line (28KM) from 400/220 KV Dichpally SS to proposed 220/11kV Yacharam Thanda Substation	
(iii)	2 Nos 220 KV Bay Extensions at 400/220 KV Dichapilly SS.	

Within one week of receipt of intimation from Superintending Engineer/ Executive Engineer concerned, the contractor shall take over the approved layout, otherwise the date after one week of intimation to the contractor for taking over of approved layout shall be the deemed date of handing over of approved layout and will be taken as date of commencement of work.

The detailed program for supplies i.e., PERT chart shall be given by the contractor in the kickoff meeting, which shall match PERT chart of works schedule (schedule B) as the same material are to be utilized for carrying out the works. The kickoff meeting will be held within 15 days from the date of issue of Letter of Intent. The contractor shall supply the Materials / Equipments as per the PERT chart.

On the date of Kick-off meeting the Executive Engineer shall finalize and confirm to the contractor regarding specific type of Towers to be used and the drawings applicable and all the quantities of Materials / Equipment in writing and shall make a copy to the under signed.

The contractor shall submit bar chart pertaining to Supply of Material/ Equipment for approval during the kick-off-meeting.

During the kick-off-meeting TSTRANSCO will communicate bar-chart indicating break up of percentage (%) of line profiles that will be handover to the contractor.

TSTRANSCO also will furnish work chart with regard to supply of materials like Automation panels/Telecom equipment etc., to optimize the resources and to ensure speedy completion of work.

The contractor shall obtain clarifications related to all technical matters from the concerned Superintending Engineer/ LIS/ Karimnagar.

## **11. PENALTY FOR LATE SUPPLIES / COMPLETION :**

**11.1** The delivery period mentioned above is the essence of the Contract. Penalty will be levied as follows for delay in supply of equipment / material.

a) Penalties for delays in supply of material with in completion period:

In case of non-achievement of Targets of the scheduled supplies by the Contractor when compared with the PERT /BAR charts as accepted in the Kickoff meetings, whatever may be the reasons; the TSTRANSCO shall levy and collect the penalty @ 1% per month of value of non-achieved targets fixed in the Kickoff meeting. However if the supply is completed within the total scheduled completion period the penalty recovered shall be released.

b) Penalties after overall completion period:

In case of delay in supply of material / equipment beyond overall completion period, whatever may be the reasons; the TSTRANSCO shall levy and collect the penalty @ 0.5% per week of the delay on the delayed value of the Materials / Equipment.

However the sum of the penalties stated above are subject to a maximum of 10% of the total value of the Purchase Order. Once the maximum is reached, TSTRANSCO may consider termination of the P.O.

The right of the TSTRANSCO to levy penalty shall be without prejudice to its rights under the law including the right to get the balance supplies executed by other agencies at the risk and cost of the contractor. This is in addition to the right of the TSTRANSCO to recover any damages from the contractor and also blacklisting.

In case the contractor fails to execute the supplies as per the program or in the opinion of purchaser, the supplies are progressing at a slow pace, TSTRANSCO reserves its right to get the balance supplies or part of balance supplies executed through other agencies at the

risk and cost of the contractor. This is in addition to the right of the TSTRANSCO to recover any damage from the contractor and also blacklisting.

## 11.2 PENALTIES IMPOSED FOR DEFICIENCIES IN QUALITY OF WORKS:

During execution of works, if any deficiencies in quality of works is found in deviation to the Specification/ Agreement, a minimum penalty of Rs.5000 to Rs.30,000/- shall be levied for deficiencies as per each category as mentioned below.

**Category I :** Not using (i) prescribed shoring, shuttering and dewatering equipment, (ii) measurement boxes, (iii) Form boxes for different types of foundations and steel measuring boxes, (iv) not providing adequate number of chairs to the steel reinforcements, (v) not carrying out back filling and compaction of the foundation pits in layers and leveling the tower footings properly, (vi) not ensuring that the excavated earth is dumped at least 2 meters away from the pit etc., and (vii) not providing copings to the tower legs/stubs (viii) not providing water tanker, Earth rammers/Earth vibrators.

**Category II :** Use of reinforcement steel other than TISCO, VSP and SAIL makes, not using vibrators for effective consolidation of the concrete during foundation works, not using proper templates for firmly keeping the stubs in position when templates are supplied by the contractor & improper fixing of stubs, non ensuring of tower verticality, use of rusted stubs and tower parts if supply is by the contractor, non painting of butt joints and rusted stubs with zinc rich paint immediately after erection of the towers & stringing, non fixing of earth flat to the stub, non deployment of technical personnel for supervision of works by the contractor. Also not fixing of vibration dampers firmly, repair sleeves wherever necessary, not properly fixing of arcing horns both tower side and line side and bird guards etc., as per specification.

**Category III :** Use of improper grade / quality of raw material like H.B.G. metal, water and sand for concreting, using clogged and / or lump / clotted cement for concreting, not ensuring proper curing for foundation concrete, not ensuring that all the members of the tower are placed in position and firmly fixed with bolts and nuts immediately after erection of tower, not ensuring that Half round seam welding of the nuts before stringing of the line.

For the above deficiencies in the quality of works noticed by the Engineer, penalties shall be levied as given below.

Type of category	First instance (Rs.)	Second instance (Rs.)	Third instance (Rs.)
Category I	5,000/-	10,000/-	15,000/-
Category II	7,500/-	15,000/-	22,500/-
Category III	10,000/-	20,000/-	30,000/-

In the event of fourth instance of noticing the deficiency of quality of works in any of the above categories, the bidder shall be debarred from participating **in future tenders for a minimum period of one year.**

Non-providing of vehicle as per the requests of the section officer shall attract a penalty of Rs. 500/- per day.

- 11.3** Incentives for early completion of the works: Incentives to executing agencies / contractors will be given for early completion of the transmission line works based on the formula as detailed below.

Incentive Bonus Formula.

$$I = Z * \{Y/(X/3)\} * 4\%,$$

Where as

I = Incentive Bonus,

Z = Project cost

Y = Days equivalent to the difference of the Scheduled Project commissioning Date and the Project commissioning date.

X=Time period in days for completion of a Project specified in the Specification/ bidding documents of the Project.

However Y should be > 30 days and Incentive Bonus is limited to 4% of the Project Cost Example for a project cost of a line with 10 crores for which the completion period is 12 months (365 days.). If the agency completed the work before 60 days ahead of the schedule.

The bonus is

$$I = 10 \text{ Cr} * \{60 / (365/3)\} * 4\% = \text{Rs. } 19,72,602/- \text{ (However the bonus will be limited to 4\% of project cost)}$$

Incentives will not be applicable for Substation and Bulk Load, Private Power Project works and DC works. Incentives are applicable for the Transmission lines taken up under capital works. No incentives for lines less than 10 km. Length of line for incentive is the line length specified in the lot.

## **12. PERFORMANCE SECURITY:**

As per Clause (4.1), Section-II 'Financial' of Volume-I of the Specification, you shall furnish performance security equal to ten percent (**10%**) of the value of Schedule –A as detailed below within 15 days from the date of issue of **Letter of Intent**, for the proper execution / fulfillment of contract.

- (A) **Bank Guarantee against Performance Security (Supply): as per Clause 4.1, Section - II Financial of VOL-I of Specification @ 10% i.e., Rs.4,13,66,400.00** with a validity of 12 months over and above the completion



period and with two months claim period thereafter.

**(B) Additional Bank Guarantees:**

**Bank Guarantee against Additional Performance Security towards Supply of Transformers @ 10% i.e., Rs. 1,12,16,000.00** with a validity for the entire period of the contract (completion period +12 months with claim period of 2 months thereafter).

The performance security shall be forfeited with relevant Taxes & Duties as applicable, if you fail to fulfill the terms of the contract. You shall extend the validity of the performance security well in advance as and when required as per the terms of the contract as and when requested by TSTRANSCO.

**PERFORMANCE GUARANTEE:**

- i) The contractor shall warrant for the satisfactory performance of the materials/ equipment supplied, for a minimum period of **12** months from the date of commissioning of the project (Line/Sub-Station/Bay which ever is later).Where the suppliers/ Manufacturers provide longer period of warranty than mentioned above, TSTRANSCO shall be entitled for such longer warranty.

**NOTE:WARRANTY:** The Transformers along with all accessories shall be under warranty for the satisfactory functioning as per specification for a minimum period of 60 months from the check measurement date in Form-13 i.e. the date of receipt of Transformers in full shape at Stores or site in good condition.

- ii) Equipment, sub-assemblies or spares, or parts replaced / repaired under warranty shall have a further warrantee of 12 months from the date of replacement / repair.
- iii) If during the period of guarantee, the Engineer decide and inform in writing to the contractor that any equipment, part of equipment or material is defective, the contractor on receiving details of such defects or deficiencies shall at his own expense, irrespective of reimbursement of insurance company, rectify/replace the defective material within seven (7) days of his receiving the notice or within such reasonable time as TSTRANSCO may deem proper for making it good. The decision whether correction of the defects should be through repair or by replacement shall be the sole discretion of the TSTRANSCO.
- iv) In the event of contractor not responding to the intimation of the Engineer as mentioned above, the Engineer may arrange for a third party to correct the defects after duly giving the contractor at least seven (7) days' notice of its intention to use a third party to correct a defect. If the contractor does not correct the defect himself within this notice period, the Engineer may have the defect corrected by the third party. The cost of such rectification will be deducted / collected from the balance pending bills or retention amounts or

performance / additional / retention securities or amounts of the contractor either in this contract or other contracts or any other securities.

**14. PAYING OFFICER & CONSIGNEE:**

The Paying Officer SE/OMC/Karimnagar and Agreement Authority is Superintending Engineer/LIS/Karimnagar/TSTRANSCO. The consignee will be concerned Executive Engineer/LIS/Nizamabad.

**15. APPROVAL OF SUB-VENDORS FOR EQUIPMENT/MATERIALS AND APPROVAL OF GENERAL TECHNICAL PARTICULARS, DRAWINGS, BoMs ETC.**

The materials / equipment required for this project shall be invariably purchased from the manufacturers listed in the specification who have already supplied similar materials to TSTRANSCO and have proven performance.

**16. QUALITY OF EQUIPMENT/MATERIALS:**

Equipment/materials supplied by you shall be of good quality. You shall furnish samples and get them tested in the presence of the TSTRANSCO's Engineer/ representative. The materials shall be dispatched only after inspection, testing and approval by the TSTRANSCO. The tests to be carried out to the equipment/ material shall be in accordance with Volume-2 of the Specification.

**17.1 Quality Assurance Plan:**

The Quality Assurance Plan of TSTRANSCO is appended to the specification. You shall adhere to the Quality Assurance Plan. You shall maintain the quality standards as per specification and shall attend the remarks of TSTRANSCO Quality Control wing on top most priority without any reminders from TSTRANSCO.

**17.2 Quality Control & Inspections:**

**Standard:** The goods supplied under this contract shall conform to the standards mentioned in the Technical Specifications and when no applicable standard is mentioned, the standard specified by the Institution of Central/State Government or internationally recognized Institutions shall be applicable and such standards shall be of latest version issued by the concerned institution.

**17.3 Inspections and Tests:**

- i. The purchaser or his representative shall have access to the Contractor's or Manufacturer's work at any time during working hours for the purpose of inspecting and testing the materials during manufacturing of the materials / equipment and may select test samples from the materials going into plant and equipment.

- ii. The inspections and tests may be conducted in the premises of the manufacturer/supplier, at the point of delivery and/or at the final destination stores i.e. at the site. Where tests are conducted in the premises of Manufacturer / supplier, all reasonable facilities and assistance including access to drawings and production data shall be furnished at no extra charge to the Purchaser.
- iii. If any inspected or tested materials fail to conform to specifications, the inspection officer may reject them and the Manufacturer / Supplier shall either replace the rejected materials or make all alterations necessary to meet specification requirements free of cost to the Purchaser.
- iv. The Purchaser's right to inspect, test and where necessary, reject the materials/equipment after their arrival at the site, shall in no way be limited or waived by reason of the materials/equipment having been previously inspected, tested and passed by the Purchaser or his representative prior to the dispatch.
- v. The cost of making any test shall be borne by the contractor, if such test is clearly intended by or provided for in the contract.

**17.4 Cost of tests not provided for:**

TSTRANSCO may decide to conduct certain other tests not covered in this Specification on the materials to be supplied, by an independent person or agency at any place other than the site or the place of manufacture of the materials. The cost of such tests shall still to be borne by the contractor. If the tests show that the workmanship or quality of materials are not in accordance with the provisions of the contract the same may be replaced with new one conforming to Specification at Contractor's cost.

**17.5 Quality of Materials and Workmanship:**

All materials and workmanship shall be of the respective kinds described in the contract and in accordance with the Engineer's instructions and shall be subjected to change from time to time to such tests as the Engineer may direct at the place of manufacture or fabrication or on the site or at all places or any such places. The contractor shall provide such assistance, instruments, machines, labour and materials that are normally required for examining, measuring and testing any work and the quality, weight or quantity of any materials used and shall supply samples of materials before incorporation in the works, for testing as may be selected and required by Engineer.

**17.6 Cost of Samples:** The contractor at his own cost shall supply all samples, if the supply thereof is clearly intended by or provided for in the contract.

**17.7 Inspection of operation:**

The Engineer and any person authorized by him shall at all times have access to all workshops and places from where materials are being obtained and the contractor shall afford every facility and every assistance in or in obtaining the right to such access.

**17.8 Inspection of MS/GI Materials:**

The Contractor / fabricator shall invariably use the steel angles manufactured by SAIL, VSP, TISCO, ISCO or any other TSTRANSCO approved re-rollers for the fabrication of Line and Substation structures. The contractor shall offer inspection after fabrication of materials duly enclosing the readiness letter of the fabricator. The cost of 3rd party laboratory charges and any other testing charges and samples collection expenses are to the account of contractor and shall include in the cost of materials while quoting. The fabricator/ re-roller shall furnish copies of evidence of procurement of raw materials from above steel angle manufactures (Copies of invoice, test reports shall be handed over to the inspecting officer).

**18. EQUIPMENT/MATERIAL REQUIRED FOR THE WORK:**

All the equipment/material required under the scope of this contract shall be supplied by you. The standards, workmanship and technical requirements of these equipment / materials shall conform to the relevant standards and Volume-II 'Technical Specification', of the specification No.e-TSTLI-03/2019.

**19. REPLACEMENT:**

The contractor is responsible for the safe delivery of material in good condition and in full shape without any shortages at the destination. In the event of the materials handed over to you for the execution of this contract being lost, damaged or destroyed while being in your custody before being handed over to the TSTRANSCO, you shall be liable to make good the loss without any extra cost to the TSTRANSCO.

**20. GUARANTEED TECHNICAL PARTICULARS AND TYPE TESTS, MANUFACTURING CLEARANCE:**

Within fifteen days of receipt of this order you are requested to submit the full particulars of materials to be supplied by you along with Guaranteed Technical Particulars, drawings, type test reports, Quality Assurance Plan for approval.

- (a) The detailed program of material manufacturing/offer/supply/erection with probable dates.
- (b) The detailed program of survey, foundation, erection of towers, stringing and commissioning of line.

Further you are requested to obtain proper approvals for the above before commencing manufacturing of the material. It is mandatory to obtain manufacturing clearance for the quantities of all the material from the concerned Executive Engineer/LIS in writing so as to ensure the correctness of the quantities required for the work.

The contractor shall adhere to the Principal parameters/Guaranteed Technical Particulars specified in the Specification and also the approved list of manufacturers as specified in the specification.

All the equipment/material covered under Schedule-A of this P.O. shall be fully type

tested by the contractor or his vendor as per relevant standards. The type tests should have been conducted on similar or higher capacity equipment not earlier than five years from the date of bid opening(05.02.2020) for all the equipment/material **and for Power Transformers,** the date of type tests shall **be within ten years** as on the date of bid opening(05.02.2020).

**21. DESIGNS AND DRAWINGS:**

Foundation drawings will be furnished by the department.

TSTRANSCO has provided scanned copies of approved drawings in TSTRANSCO website. The contractor may download the approved drawings from the TSTRANSCO website and utilize for execution of subject work. Approval of drawings by TSTRANSCO shall not absolve you from your responsibility of correctness thereof or from the results arising out of error or omission therein or from any obligation or liability under the contract. Any supplementary drawings necessary to permit the complete design of the installation prior to receiving the equipment shall also be supplied. Six sets of all approved drawings and one set of reproducible drawings shall be furnished by you. One set of drawings and instruction manuals shall be sent along with the equipment at the time of dispatch. Copies of the drawings and manuals shall also be sent to other offices as indicated below.

- Consignee : One set of approved drawings for each consignment.
- Paying officer : Two sets of drawings and instruction manuals.
- Concerned Executive Engineer/Construction : Two sets of drawings and instruction manuals
- To this office : Four sets

Erection, operation and maintenance manuals shall be supplied as follows with the equipment:

- Consignee : One set for each consignment.
- Paying officer : Two sets
- Concerned Executive Engineer/Construction : Two sets
- To this office : Six sets

**22. INSPECTION OF EQUIPMENT/MATERIALS:**

Inspection shall be made in accordance with the clause (24) of Section-I, volume-I of the Specification.

The TSTRANSCO at its discretion may get the materials/ equipment inspected by a Third Party if it feels necessary in accordance with the clause (24) of Section-I, volume-I of the Specification.

The TSTRANSCO representative shall at all times be entitled to have access to the works and all other places of manufacture. The Supplier shall provide all facilities for unrestricted inspection of the works, raw materials, and process of manufacture and for conducting necessary tests. The Contractor shall inform well in advance of the commencement of manufacture,

progress of manufacture thereof so that arrangements could be made for inspection.

The Contractor shall give **at least 15 days advance intimation** to enable the Purchaser to depute his representative for witnessing the acceptance and routine tests. Inspection of tower parts shall be arranged only if they are offered for full shape towers. No material shall be dispatched from its point of manufacture before it has been satisfactorily inspected and tested, unless the Purchaser in writing waves off the inspection. In the later case also, material shall be dispatched only after satisfactorily conducting all the tests specified as per IS and after test certificates are approved by the Purchaser. The acceptance of any material shall in no way relieve the Contractor of his responsibility for meeting all the requirements of this specification and shall not prevent subsequent rejection if the material is later found to be defective.

**23. DISPATCH INSTRUCTIONS:**

The dispatch instructions will be communicated to you while approving the Test Certificates furnished as and when the materials/equipment is inspected. The material/equipment shall be dispatched by Road Transport through reliable transport agency with freight prepaid and duly insured. Materials/equipment, which are not conforming to IS standards specified in Bid documents, or are not of acceptable quantity, or are not as per approved drawings, would be deemed to be not delivered.

Three copies of test certificates containing the results of all tests carried out shall be submitted to the Chief Engineer/LIS and got approved before dispatch. The supplier shall maintain all test reports of routine and stage tests conducted during manufacture. These shall be produced for verification as and when requested by the Purchaser.

**24. COMPLETENESS OF MATERIAL:**

All fittings, accessories and apparatus which may not have been specifically mentioned in the specification, tender or this purchase order but which are useful or necessary for the efficient, economic and safe operation of the equipment/ material supplied, shall be deemed to be included under the scope of the contract and shall be provided by the Contractor without extra charges. All the equipment/ material shall be complete in all respects whether such details are mentioned in this Purchase Order or not.

**25. PACKING:**

The Supplier/Manufacturer shall provide such packing for the material/ equipment as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the technical specification for material/equipment. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, humidity etc. during transit and open storage.

**26. ACCEPTANCE CERTIFICATE:**

Upon receipt of material/equipment at the designated destination and after inspection, acceptance certificate (Form-13) will be issued by the concerned Executive Engineer/ LIS in

which he will certify the date on which the material/equipment has been so accepted. Material / Equipment received shall be verified by concerned Assistant Engineer-I/ Construction/LIS/Karimnagar and check measured by the concerned Executive Engineer/LIS at the site stores. If material/ equipment is found defective due to bad workmanship or damaged due to defective packing or otherwise not in conformity with requirements of the contract, taking over of material and issue of acceptance certificate shall be withheld until such time the defects have been corrected. The consignee will notify the defects found in the material after receipt of material at destination. The issue of acceptance certificate will no way relieve the contractor of his responsibility for supply and satisfactory performance of material/equipment as per technical requirements given in the specification.

**27. OPERATION AND MAINTENANCE MANUALS:**

Contractor shall supply 10 copies of operation and Maintenance manuals and approved drawings along with the equipment. If the contractor does not supply the operation and Maintenance manuals and approved drawings as stated above the equipment bills will be kept on hold.

10 copies of Contract Agreements with specification, QAP, all the approved drawings of Materials, GTPs, BOMs, Layout plans etc., shall be supplied by the Contractor to distribute to field Construction and O&M wings and to keep the spare records at Head Quarters. . The contractor shall prepare the final tower schedule and shall supply in 10 copies The cost of the above shall be borne by the Contractor and shall provide as instructed by the Concerned Executive Engineer / LIS.

**28. AGREEMENT:**

28.1. The Superintending Engineer /LIS Circle/Karimnagar/TSTRANSCO shall be the agreement authority. The Assistant Engineer-I/Construction/LIS/Nizamabad is the consignee and the Executive Engineer/LIS Divn/ Nizamabad/TSTRANSCO is the check measuring authority. The contractor shall attend the Office of the Superintending Engineer /LIS/TSTRANSCO/ Karimnagar within 15 days of the detailed Order to enter into an agreement. The Superintending Engineer /LIS Circle/ Karimnagar/ TSTRANSCO shall enter an agreement with the contractor duly verifying the following.

- i. The PAN card, GST registration, Labour License, valid A-grade Electrical License to execute EHT works in Telangana.
- ii. Valid Performance Bank Guarantee.
- iii. Authorization / power of attorney of the contractor representative to sign the agreement.

28.2. The following documents shall also be made part of the agreement.

- i. The copy of the Letter of Intent.
- ii. The copy of the Purchase Order.
- iii. The copy of the Volume-1 of the Specification.
- iv. Copy of the Performance Bank Guarantee and its approval.
- v. Authorization / power of attorney of the contractor representative to sign the agreement.
- vi. Copies of the statutory registrations of the contractor etc.

**29. MANAGEMENT /CO-ORDINATION MEETINGS:**

Monthly / Fortnight review of supplies shall be conducted by the concerned Superintending Engineer/LIS or Chief Engineer /LIS. The contractor or his representative shall invariably attend the meetings whenever called. The representative of the contractor who attends the kick-off meetings and review meetings shall be qualified and shall be authorized by the contractor with the details of qualification and responsibility and designation of the authorized person.

**30. EARLY WARNING:**

The contractor has to intimate the TSTRANSCO at the earliest opportunity of specific likely future events or circumstances, which may adversely affect the Project Implementation Schedule. The contractor shall cooperate with the officers of TSTRANSCO in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced.

**31. RESPONSIBILITY OF THE CONTRACTOR:**

The contractor is responsible for the safe delivery of the goods in good condition at destination. He should acquaint himself of the conditions obtaining in regard to supply of the materials. TSTRANSCO shall not be responsible for any mismatch of material supply and works on account of whatever so the reasons. The contractor is responsible to submit the material bills (immediately after receipt of materials at site) promptly and submit all the required enclosures without fail. TSTRANSCO shall not be responsible for any delayed payments whatever so the reasons.

**32. EXTENSION OF THE DELIVERY/COMPLETION DATE:**

As the supply of materials is as per work schedule, and when a work cannot be completed within the completion period indicated for reasons beyond the control of the contractor i.e. due to Force Majeure conditions mentioned below or due to the reasons attributable to TSTRANSCO, the contractor shall represent for the same and extension of time without levying penalty shall be granted only on the issue of an undertaking by the contractor that they will not put forth at a later date, any claims for extra payments towards increased overheads, material/ equipment/works



costs etc. during the extended period. It is the sole discretion of the TSTRANSCO to grant extension of completion period.

**33. FORCE MAJEURE:**

The Contractor will not be liable for forfeiture of its performance security, penalty for late delivery, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contact is the result of an event of Force Majeure.

For purposes of this clause, "Force Majeure" means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but are not restricted to, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.

If a Force Majeure situation arises, within 15 days from the date of eventuality the Contractor shall notify the Purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Contractor shall continue to perform their obligations under the Contract as far as it is reasonably practice, and will seek all reasonable alternative means for performance not prevented by the Force Majeure event.

**34. DELAYS ORDERED BY THE PURCHASER**

TSTRANSCO reserves the right to suspend and reinstate execution of whole or any part of the supplies without invalidating the provisions of the order. Orders for suspension or reinstatement of the supplies will be issued by the Engineer to the Contractor in writing. The time for completion of the supplies will be extended suitably to account for duration of the suspension. Any costs incurred by the contractor due to increased overheads, idling of labour etc., as a result of such suspension will not be reimbursed to the contractor.

**35. ACCOUNTING OF SURPLUS MATERIALS/ SETTLEMENT OF MATERIAL ACCOUNT:**

- (a) On completion of works, all the surplus material which has been already billed by contractor to TS TRANSCO but not used by contractor in the project, shall be handed over to designated TS TRANSCO stores at the cost of the contractor within the time limit of 2 months of commissioning of the project. However, if the material is not handed over within such time limit or in the opinion of designate officer of TS TRANSCO who is in-charge of the works, such material is not in fit condition for use, such material shall be retained by the contractor and recovery shall be made from contractor at the rate as per the contract rate.
- (b) In exceptional cases, in order to expedite work progress, whenever TS TRANSCO issues the material from its stores on returnable basis to the contractor, the contractor shall return such material within 30 days from the date of issue of such material along with the interest

on the value of such material at the rate of 2% per month or part thereof. However, if contractor fails to return material within 30 days of issue of such material, the material shall be deemed to have been sold to contractor on the date of its issue to contractor at a price which shall be 150% of the procurement cost and such cost shall be recovered from contractor along with the interest at 2% per month or part thereof from the date of issue of material till amount is recovered.

35.1 All the balance works if any shall have to be executed by the contractor within two months of charging of Bays / line. If the contractor fails to complete the balance works within the above time schedule the works will be executed by the other agencies and will back charge to the contractor. However, the completed works shall be handed over to O&M wing by construction wing within 3 months after commissioning.

**36. TECHNICAL AUDIT:**

- i) All the completed works shall be technically audited by Quality Assurance wing within two months of the completion/ commissioning of the project for the correctness of project in terms of agreements, specifications, detailed project report/ technical sanction, deviation in quantities & rates.
- ii) All the remarks which are pointed out by Quality wing in the above technical audit shall invariably attend by CONSTRUCTION wing within one month and in case the remarks are pertaining to the execution of work which is in the scope of the agreement, the Contractor has to attend the remarks without insisting of any additional payment.
- iii) *Contractor must be held responsible for rectification/completion of works as on date of commissioning and for defects within the warranty period.*
- iv) *However, all the liabilities of the contractor covered under performance guarantee period shall hold good*

**37. TAKING OVER:**

Upon successful completion of all the commissioning tests to be performed at site on equipment furnished and erected, and on successful commissioning of the project, the Purchaser shall issue to the Contractor 'a taking over Certificate' as a proof of the final acceptance of the project. However such taking over certificate will be issued only after handing over of all the manuals, drawings, tower schedules as per Clause 26 above and after settlement of materials account and final bill.

**38. CORRESPONDENCE:**

The officers mentioned under Paragraphs (28) of this Purchase Order will be field incharge. All matters relating to technical clarifications, completion, handing over and payments shall be referred to them with copies marked to this Office and Chief Engineer/

LIS/VS/Hyderabad.

**39. JURISDICTION:**

Any and all disputes or differences arising out of or touching this order shall be decided by a panel of arbitrators as detailed below.

	<u>Value of claim</u>	<u>Panel of arbitrators</u>
i)	Disputes involving amounts up to Rs. 10,000/-	Superintending Engineer of TSTRANSCO other than the circle to which the dispute relates.
ii)	Disputes involving amounts of above Rs. 10,000/- but less than Rs.50,000/-	Any Chief Engineer/ED of TSTRANSCO,
iii)	There shall not be any reference of disputes, the value of which is above Rs.50,000 /- to arbitration. The parties shall approach the competent Civil Courts situated in Hyderabad /Secunderabad only, if any such disputes arise.	

**40. TERMINATION OF CONTRACT:**

If it is found that the contractor does not fulfill his obligations as per the terms of the Specification/ Purchase Order, TSTRANSCO will be entitled to terminate the Order in part or full by giving 15 days notice and get the balance supplies completed through other agencies at the contractor's cost and risk.

The contractor so penalized shall be blacklisted for 3 years from the date of termination of contract.

In the event of termination of contract due to delay attributable to the contractor, TSTRANSCO is entitled to get back equipment/ material from the contractor for the payment already made but the material is not put to use, and then get the works done by other agency/ agencies for completion of contract by using the said recovered material. The contractor shall have no objection in this regard.

**41. ACKNOWLEDGEMENT:**

Please acknowledge the receipt of this Order with a confirmation of the acceptance of its contents by you and the extra copy of the order enclosed may please be returned with your signature with date in token of your acceptance, within 15 days from the date of issue of this letter.

Encl:-

Extra copy of the contract

Award letter Price Schedules

Yours faithfully,

**Sd/-**

**CHIEF ENGINEER,  
LIFT IRRIGATION SCHEMES**

(Acting for and on behalf of the  
TRANSMISSION CORPORATION OF  
TELANGANA.LTD.)

WE ACCEPT THE TERMS AND CONDITIONS OF THIS ORDER.

SIGNATURE OF THE CONTRACTOR.  
WITH SEAL AND DATE

**Copy communicated to:**

The Executive Director/Finance/TSTRANSCO/Vidyut Soudha /Hyderabad.

**Copy To:**

1. Chief Engineer/ SLDC /TSTRANSCO/Vidyut Soudha/ Hyderabad.
2. Chief Engineer/ Telecom/TSTRANSCO/Vidyut Soudha/ Hyderabad.
3. Chief Engineer/ Zone/Karimnagar/TSTRANSCO.
4. Superintending Engineer/LIS/ Karimnagar/TSTRANSCO.
5. Superintending Engineer/Civil/Karimnagar/TSTRANSCO.
6. Superintending Engineer/Telecom/ Karimnagar/TSTRANSCO.
7. SAO/P&A/TSTRANSCO/Vidyut Soudha/Hyderabad.
8. Executive Engineer/LIS/ Nizamabad/TSTRANSCO(\*)
9. Executive Engineer/Civil LIS/ Nizamabad/TSTRANSCO(\*)
10. Assistant Engineer-I/Construction/LIS/Nizamabad .(\*)

(\*) It is requested to hand over the sites/layouts to contractor and enter into an agreement with the contractor immediately. Movement of materials, right of way, statutory clearance etc., shall be arranged well in advance to enable speedy execution of works.

- (\*) It is requested to maintain two separate M-Books for recommendation works executed for Bulk Load works( upto metering including Yard and Line) and DC works (beyond metering bay).